

### **Abstract of the Disclosure**

Digital I and Q (NRZ) data streams are generated by specially configured conversion circuits, the outputs of which are applied to a F-N synthesizer to modulate the synthesizer. An illustrative conversion circuit employs a system of comparators to detect the state of analog I and Q signals input signals at each bit interval and to decode outputs of such comparators to determine the NRZ sequence that gave rise to detected states. Once so determined, these NRZ signals are applied to an F-N synthesizer in the same manner as NRZ signals. Advantageously, inputs to present inventive embodiments may be received either as analog or digital I and Q inputs, subject to selection between input modes using only a single binary input.

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